



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/539,567

08/11/2005

Jaroslav Cerny

66448-016-7

4574

25269

7590

07/11/2008

DYKEMA GOSSETT PLLC  
FRANKLIN SQUARE, THIRD FLOOR WEST  
1300 I STREET, NW  
WASHINGTON, DC 20005

EXAMINER

HAYES, BRET C

ART UNIT

PAPER NUMBER

3641

MAIL DATE

DELIVERY MODE

07/11/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/539,567	<b>Applicant(s)</b> CERNY ET AL.	
	<b>Examiner</b> Bret Hayes	<b>Art Unit</b> 3641	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 March 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 27 MAR 08 have been fully considered but they are not persuasive.
2. In response to Applicants' argument, the argument is either lacking or the examiner requests clarification.
3. Applicants assert that, "there is no disclosure that the intermediate layer is made of a layer of nickel alloy or steel which has a face-centered cubic crystalline lattice (FCC lattice) structure" (*emphasis in original*).
4. It has been asserted that WO 00/55567 does not disclose the intermediate layer made of nickel alloy or steel. This is not true. At page 6, lines 14 – 16 of the document, it is plainly disclosed that the intermediate layer may be aluminum, steel, lead, zinc, titanium, nickel, and alloys or metal matrix composites thereof (*emphasis added*). Clearly then, steel and nickel alloys are disclosed.
5. With respect to the argument perhaps being directed toward the nickel alloy or steel not being disclosed as having FCC lattice, it is noted that the previous rejection was based upon 103(a) obviousness and that this lattice was asserted to be well known in the art. No evidence has been supplied to support a conclusion that this is not the case.
6. Lastly, and perhaps what the examiner finds most confounding, the argument is directed toward a layer of nickel alloy *or* steel, while the base claim has been amended to recite nickel alloy *and* steel to overcome the previous rejection under 112, 1<sup>st</sup> paragraph.

Art Unit: 3641

7. There being nothing further in the argument, examiner must uphold the rejections previously set forth as proper.

***Claim Rejections - 35 USC § 112***

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

9. Claims 1 – 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

10. Re claim 1, the phrase “for example,” lines 4 and 5, renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d). Claim 1 further recites the limitation “the previous techniques” in line 7. There is insufficient antecedent basis for this limitation in the claim. Further still, regarding ‘the previous techniques’, it is unclear whether this recitation is intended to encompass only those recited previously, or any known techniques. The claim will be further treated on the merits *as if* ‘the previous techniques’ referred only to those recited in the claim. However, the phrase “for example” must be removed to overcome this rejection.

11. Any unspecified claim is rejected as being dependent upon a rejected base claim.

***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 1 – 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 00/55567 to Claar et al. (*Claar*).

14. Re claim 1, Claar discloses the claimed invention including multilayered steel armor **10** consisting of a front-face ballistic-resistant armor layer **11**, set forth at page 6, and a backing armor layer **13**, (same) which are fully metallurgically bonded, page 4, lines 13 – 15, by at least one joining metallic intermediate layer (3), by casting, wide-area welding techniques, using technology of explosive cladding (high-velocity impact cladding), by roll welding or by a combination of the previous techniques, (same) wherein the joining metallic intermediate layer (3) between the front-face ballistic-resistant armor layer (1) and the backing armor layer (2) is made from material featuring face-centered cubic crystalline lattice (FCC lattice)\*, in particular, from nickel alloy containing maximally 98.0 wt% of nickel alloy and steel, as set forth at page 6, lines 14 – 16. \*With respect to FCC lattice, the atomic structure is well known to be manipulated in the prior art, see austenite, gamma iron, for example, which normally has a FCC lattice. Further, it is well known that the elemental metal nickel (Ni) is normally FCC.

Therefore, whether explicitly disclosed by Claar as such or not, it is well known to produce steel and nickel alloys having these atomic lattices and would be an obvious preferred material to one of ordinary skill in the art at the time the invention was made, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

15. Re claim 2, Claar further discloses the claimed invention wherein the material of the joining metallic intermediate layer (3) contains between 50.0 wt% and 98.0 wt% of nickel and between 0.1 wt% and 45.0 wt% of at least one of the alloying elements including chromium,

Art Unit: 3641

molybdenum, manganese, niobium, titanium, iron and the rest making some other accompanying elements and usual impurities, page 3, lines 1 – 3.

16. Re claim 3, Claar further discloses the claimed invention wherein the material of the joining metallic intermediate layer (3) contains between 5.0 wt% and 50.0 wt% of nickel and between 0.1 wt% and 40.0 wt% of at least one of the alloying elements including chromium, molybdenum, manganese, niobium, titanium, iron and the rest making some other accompanying elements and usual impurities, page 3, lines 1 – 3.

17. Re claim 4, Claar discloses the claimed invention to include from 0.1 wt% to 30.0 wt% chromium, nickel, vanadium, silicone and carbon, except for a wt% of manganese. Because manganese content is known to effect properties of steel, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include or exclude, depending upon desired properties, manganese, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

18. Re claim 5, Claar discloses the claimed invention except for explicitly at least one additional layer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include at least one additional layer, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8. In this case, the inclusion or exclusion of additional layers would be left to a skilled artisan to determine the benefits over the disadvantages thereof based upon the intended or desired use.

Art Unit: 3641

19. Re claim 6, Claar discloses the claimed invention expect for the explicit recipe. Because manipulation of alloys is well known in the art, and the manipulations normally include the recited elements therein, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include these elements, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. In this case, the manufacture of steel or nickel alloys is well known and the decision to implement known elements into a metallic matrix in order to achieve an expected result does not require any inventiveness of a skilled artisan.

### ***Conclusion***

20. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication should be directed to Bret Hayes at telephone number (571) 272 – 6902 or email address [bret.hayes@uspto.gov](mailto:bret.hayes@uspto.gov), which is preferred.

Art Unit: 3641

The examiner can normally be reached Monday through Friday from 5:30 am to 2:00 pm, Eastern Standard Time.

The Central FAX Number is **571-273-8300**.

If attempts to contact the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone, can be reached at (571) 272 – 6873.

/Bret Hayes/

Examiner, Art Unit 3641

11-Jul-08